Ephemeral
Wakulla
Co.

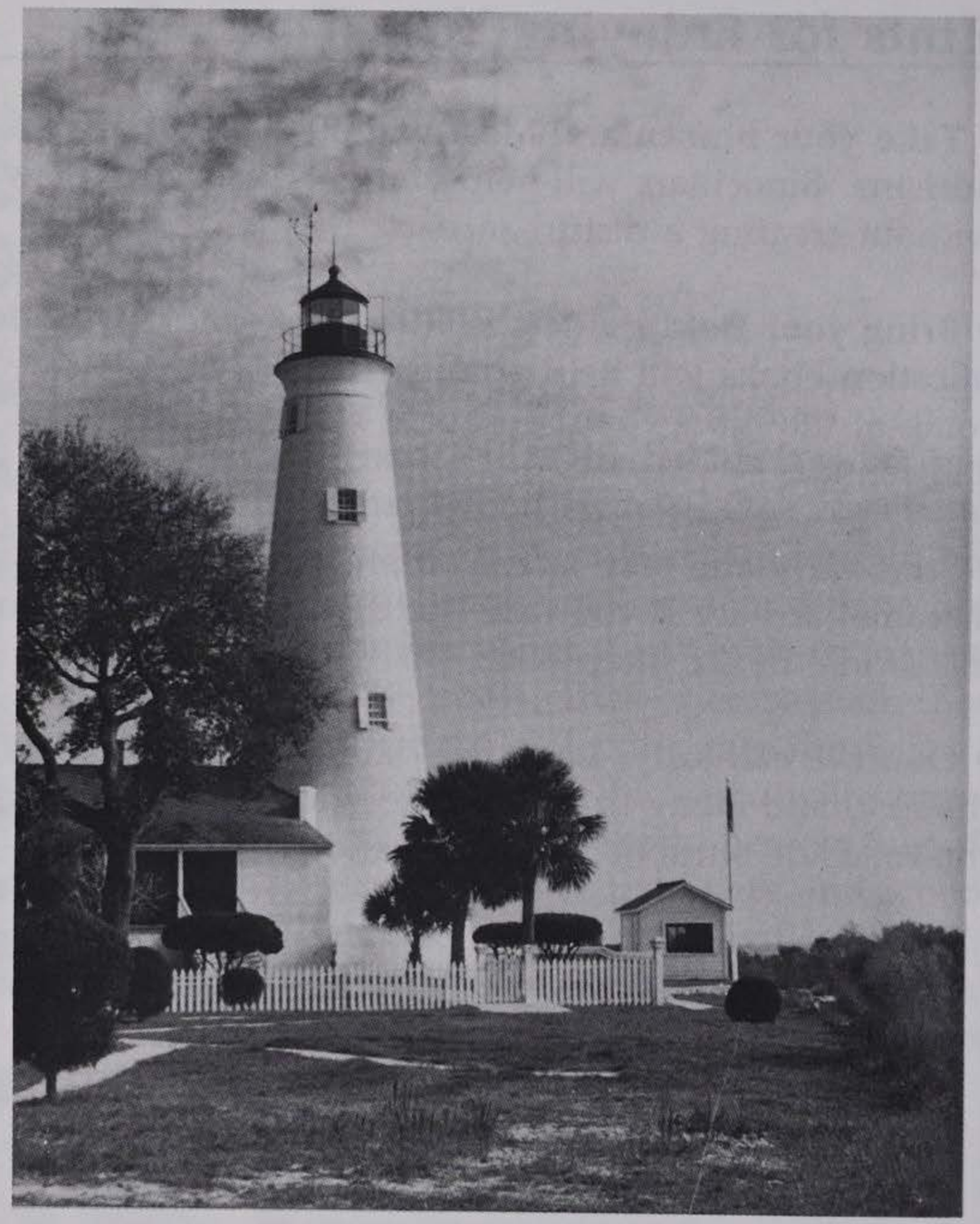
Lighthouse Road
Drive Guide

St. Marks National Wildlife Refuge, St. Marks, FL

About St. Marks National Wildlife Refuge

St. Marks National Wildlife Refuge rests along the edge of the Gulf coast of Florida, protecting a fragile environment that teems with a diversity of wildlife. Established in 1931, the refuge was originally charged with the protection of thousands of wintering waterfowl. The Civilian Conservation Corps added bridges, levees, and culverts to create pools for these winter visitors. Through the years, these additions have become important habitats for many wild creatures.

Refuge biologists and wildlife management specialists focus most of their attention on protecting and enhancing these habitats. Simply stated, a habitat is a place where an animal or group of animals lives. To be suitable, a habitat must provide water, shelter, space, and an appropriate food source for its inhabitants. Habitats are often named for the characteristic plants they support. For example, on St. Marks National Wildlife Refuge one can find pine/palmetto flatwoods, hardwood hammocks, cypress swamps, and large expanses of needlerush saltmarsh. Your tour will show you several of these habitats.



St. Marks Lighthouse, c. 1940, when a full-time lighthouse keeper resided there.

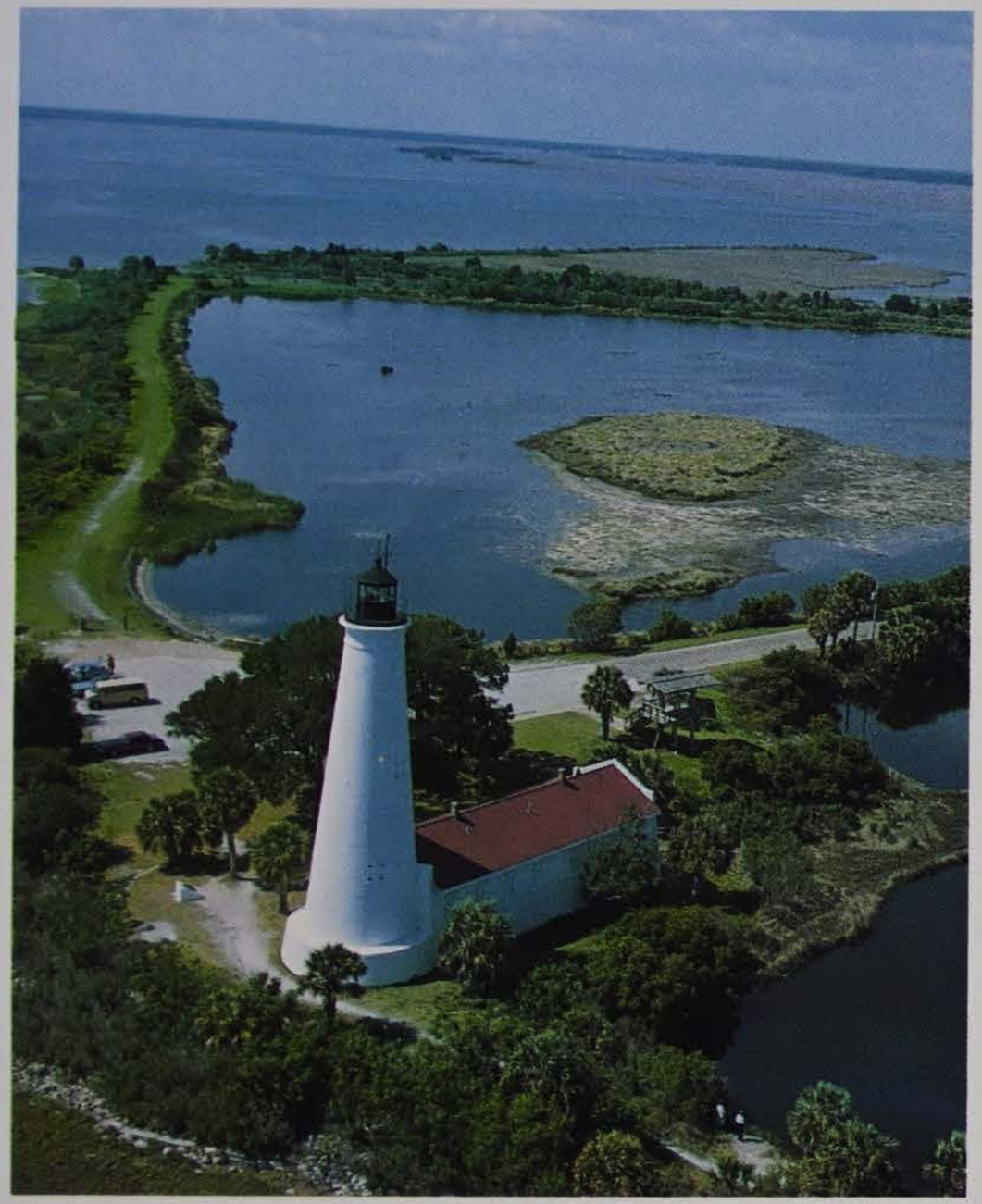


Photo by Lee Cook

Welcome and Enjoy Your Visit

Welcome to the St. Marks National Wildlife Refuge! This booklet is designed as a self-guiding ''ranger's tour'' of Lighthouse Road, one of the refuge's most frequently visited attractions. The 6.8 mile tour begins at the refuge's visitor center and concludes at the parking lot of the St. Marks Lighthouse, on the shores of Apalachee Bay. The road will lead you past alligators, bald eagles, an assortment of wetland birds, beautiful native wildflowers and a wide variety of other wildlife species.

The tour is composed of six stops and two viewing areas. Stops offer an opportunity to disembark and explore. Viewing areas offer the opportunity to observe the refuge's scenic beauty from your slowly moving vehicle. It is unsafe to park in a viewing area. This booklet contains narrative for each stop or viewing area.

A map of the area has been provided on the back cover of this guide for your information.

Hints for Enjoying Your Tour

• **Take your binoculars.** Most wildlife is wary of humans. Binoculars will help you get a close-up view without creating a disturbance.

• **Bring your field guides.** Wildlife and wildflower identification books will help you learn the identities of some of the more common north Florida native flora and fauna.

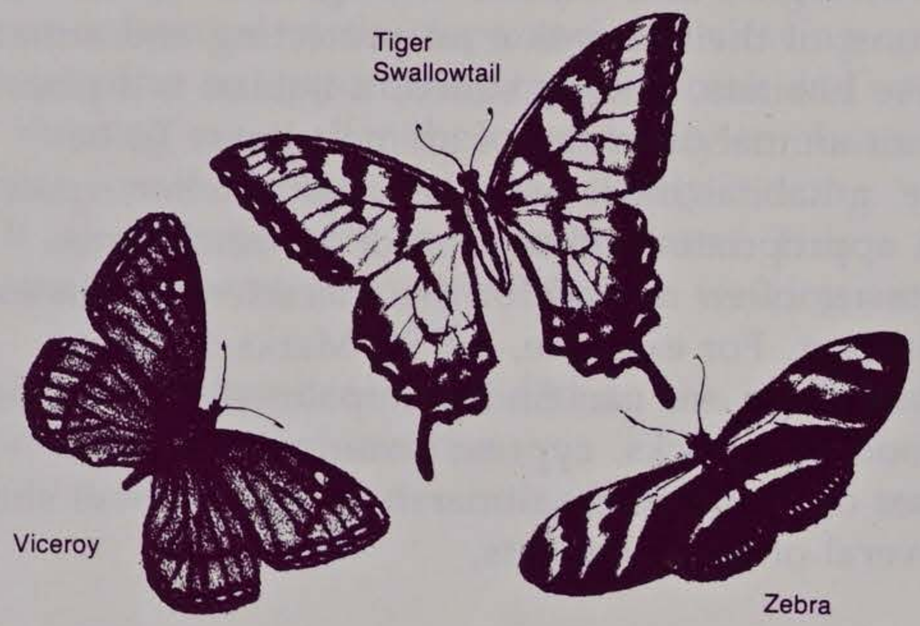
• **Start early and stay late.** You are more likely to see mammal activity if you take the drive early in the morning or late in the afternoon.

• **Observe carefully.** Look for wildlife up in the trees, the sky, and along the telephone wires; as well as in the roadside shrubbery, grasses and pools.

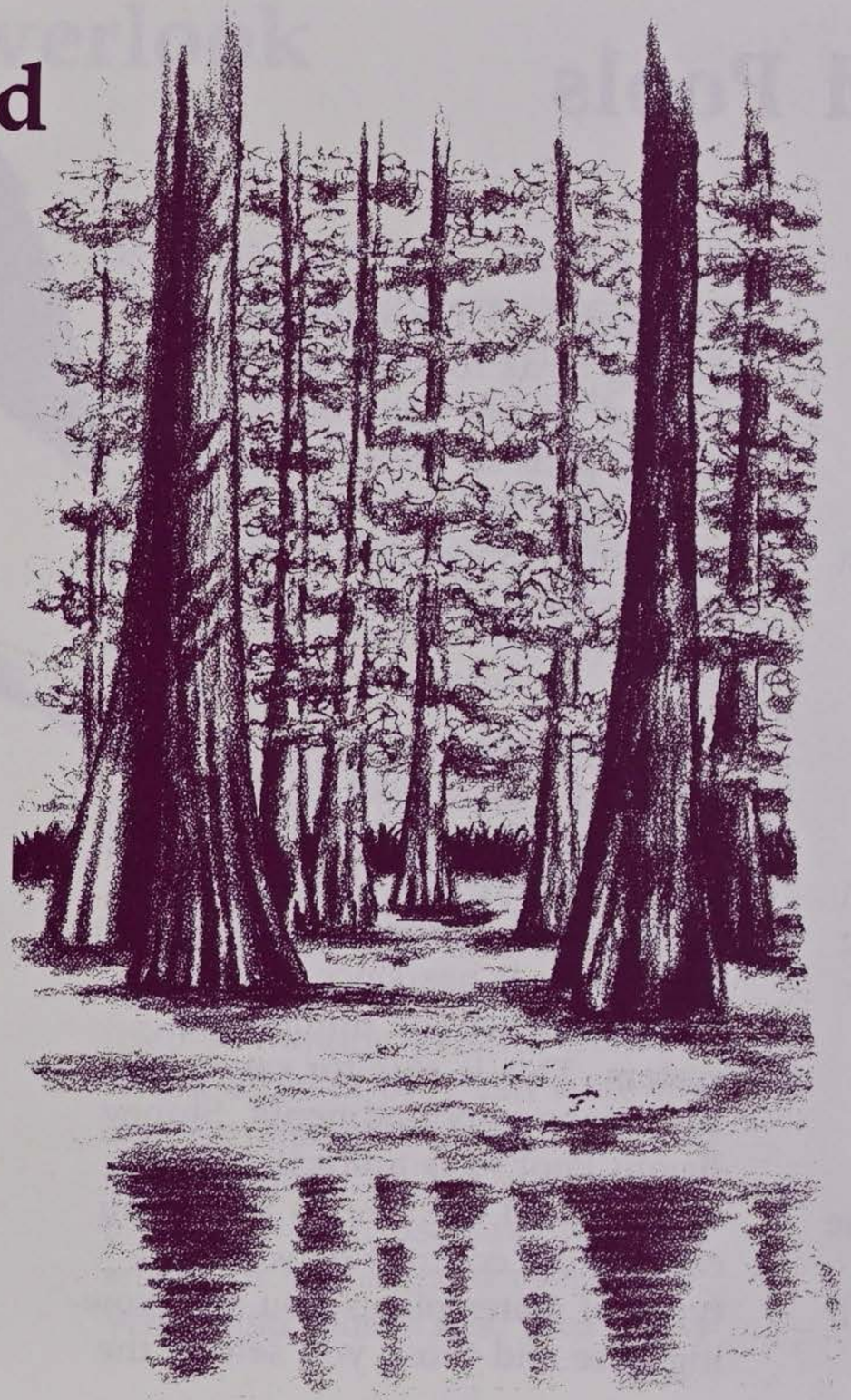
Some Important Rules

Collection of any kind and disturbance or feeding of wildlife is against the law. Feeding alligators is extremely dangerous and strictly prohibited.

Lighthouse Road is an often traveled thoroughfare. In order to ensure your safety and the safety of other visitors, please remember to pull off to the right when stopping and to follow the 35 mph speed limit at all times.



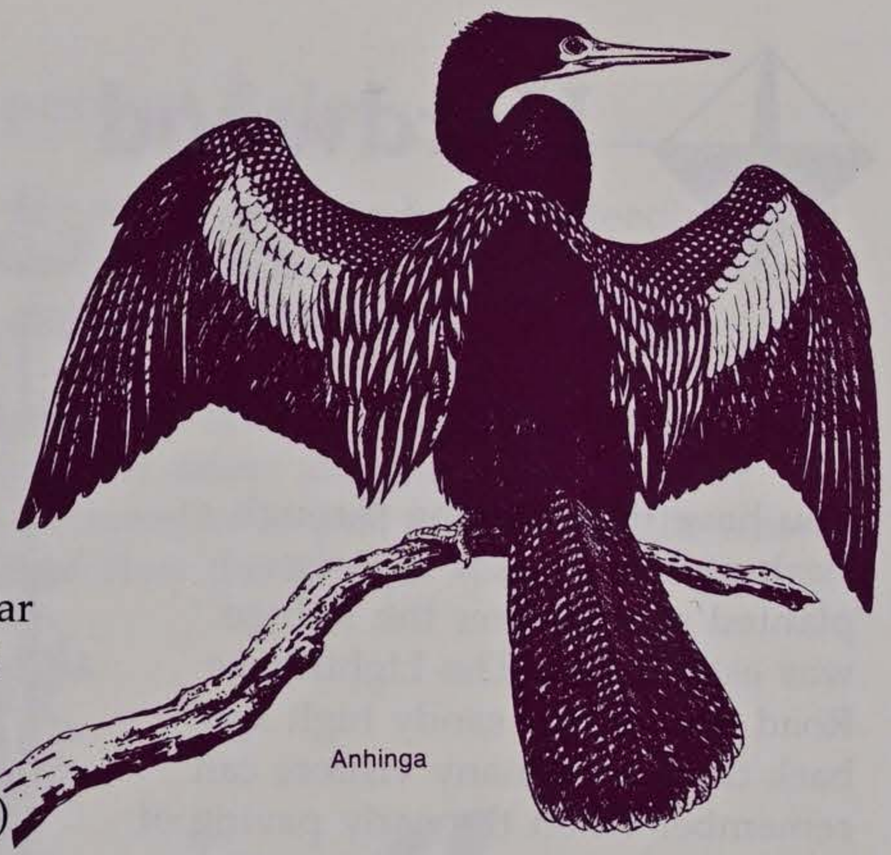
Hardwood Swamp



You have been driving through a slash pine flatwoods that was planted shortly after the Refuge was established. The Lighthouse Road was only a sandy high spot back then, and many visitors can remember when the early paving of the road wasn't much better. Some visitors remember when the potholes were so bad, you either had to have a four-wheel drive vehicle or be prepared to walk most of the way down to the lighthouse. Wakulla County transferred ownership of the road to the Refuge in 1989.

Here at these two bridges, you'll notice that the habitat has become a hardwood swamp. One of several water gauges is set up here to help the refuge biologist determine how much water is available to manage the pools. The water beneath these bridges is flowing into the East River Pool, which you will soon see. Osprey like to nest in the tall cypress trees near here and wood ducks nest in tree cavities in the swamp. Many visitors like to fish at these bridges after a hard rain and birdwatchers enjoy looking for warblers here in spring and fall.

Managed Pools


Anhinga

The large pool to the west (your right) is East River Pool. This pool was created by damming the East River with a concrete spillway. East River Pool is the major source of fresh water for the other large impoundments (man-made pools) along Lighthouse Road. Water flows by gravity under the road into canals through large cement water control structures. Water can be stored in East River Pool during dry periods to help maintain water levels in the other pools. During the winter, water levels may be lowered to allow access to deep-water food plants for wintering waterfowl. During the summer, the biologist may try to keep water levels higher to prevent the growth of cattail and other pest plants. In this pool, look for anhingas, wading birds roosting in the willows, purple gallinules among the lily pads in the summer, and ducks such as the ring-necked in the winter. Sport fishing is popular in the spring and summer in East River Pool.

Across the road on your left (east) is Stoney Bayou Pool #1. You'll notice that Stoney Bayou Pool has been numbered as well as named. At one time, Stoney Bayou was one large pool. It has since been sub-divided, hence the numbering system. This is true for several of the refuge impoundments. Stoney Bayou Pool #1 is a brackish (salt water mixed with fresh) pool. You can see the contrast between the types of water plants you see growing here and those you saw in the freshwater East River Pool. Many species of birds prefer the snails and shellfish that live in these brackish conditions. An assortment of ducks use this pool in winter, especially bufflehead, hooded merganser, and ruddy ducks. Bank fishing is popular in Stoney Bayou year-round.

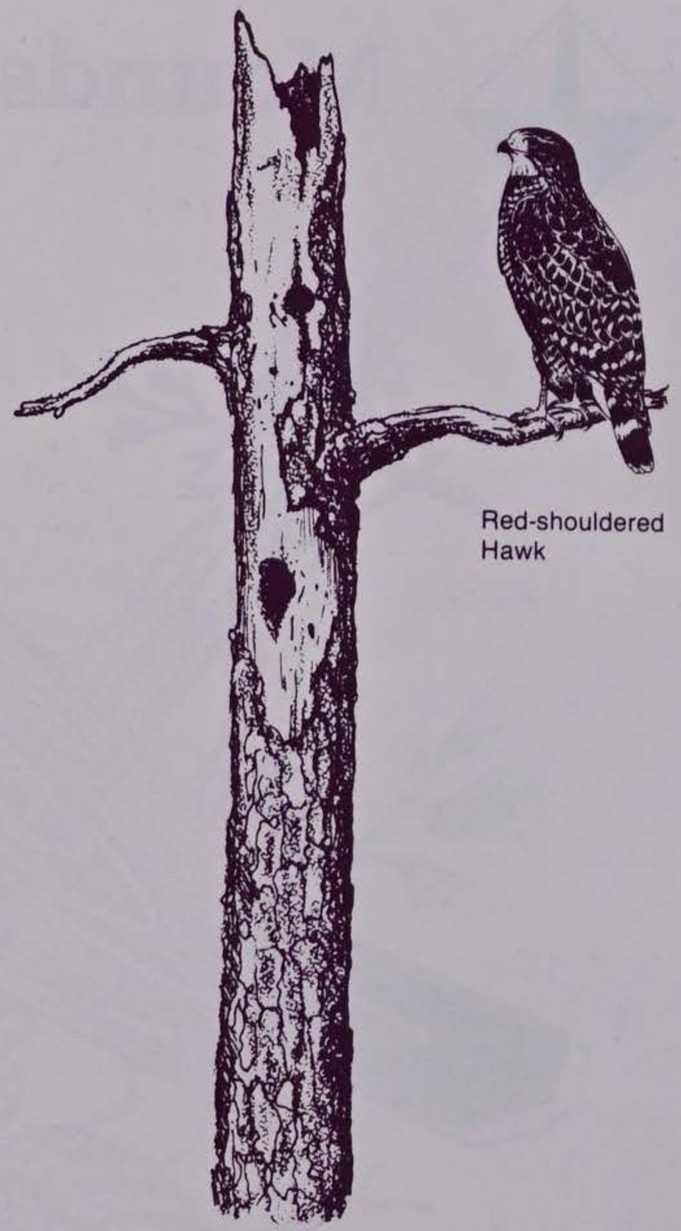
Marsh Overlook

Here's a good place to park the car and visit the wheelchair-accessible observation deck. As you pause to enjoy the view, do you notice a difference between the two sides of the road? To the east is a managed pool; to the west, a wilderness salt marsh. Both habitats are important to the refuge.

The salt marsh is actually part of a formal Wilderness Area designated by Congress in 1975. No development or motorized equipment is permitted in the Wilderness. Only prescribed burning is allowed.

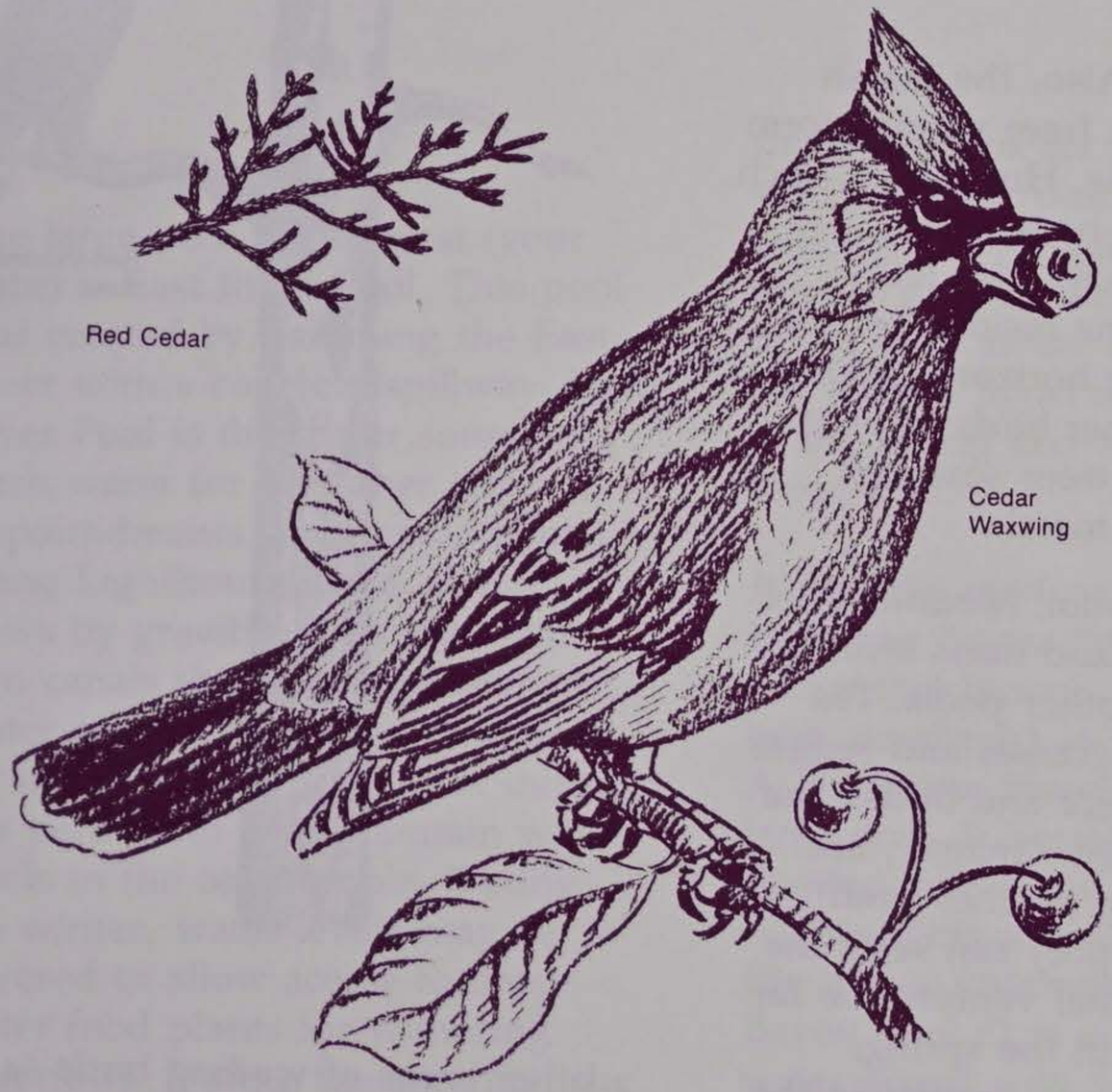
This marsh, with its tidal creeks and safe havens of black needlerush, protects many young forms of marine life in its ''nursery''. The marsh filters stormwater runoff from as far north as Tallahassee. Also, the marsh buffers the coast from strong storm waves and winds. Hurricanes, such as Kate in 1985, have winds reaching 85 m.p.h.! Yet, little damage was done inside the marsh. Scan the horizon, looking for eagles or other birds of prey perched on the trees scattered throughout the marsh.

This managed pool, Mounds Pool #1, has higher land mass levels in its center than other pools. The heavy cover of grasses and sedges protects rats, mice and birds. The dead trees, called ''snags'', are used as hunting perches from which birds of prey can seize the small animals that venture too far into the open. In the spring, bluebirds often use cavities in the snags for nesting and roosting. White and glossy ibis, plus many other types of wading birds search for small fish, shrimp, frogs and snakes along the edges of the pool.



Red-shouldered Hawk

Mounds Pools



Red Cedar

Cedar Waxwing

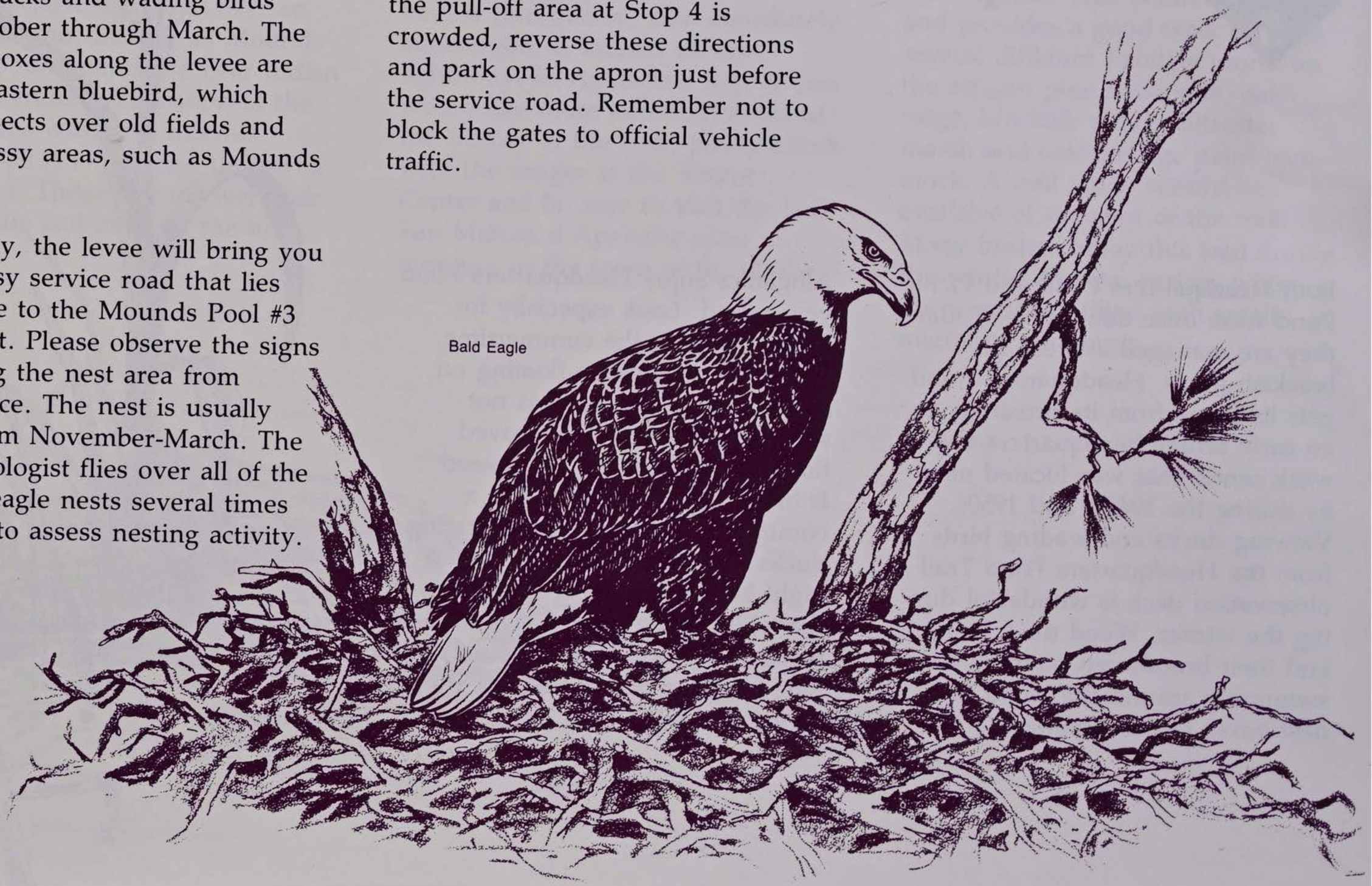
The large evergreen trees you have been seeing on the right (west) are red cedar trees. Their bluish berries are good food for cedar waxwings. The two evergreen hollies, also on the right, are more easily identified in the fall and winter when they both have bright red berries. The shrubby holly with the tiny green leaves and many small gray branches is the yaupon holly. The larger, tree-sized holly with brighter green leaves is the dahoon holly.

On the left is a short dike or levee that ''T's'' into a larger levee around Mounds Pool #3. Many birdwatchers and fishermen like to hike out all the way to the back side of Mounds Pool #3 from here. The following directions will lead you on a shorter loop hike of approximately 2.5 miles that will take you back to your car.

Turn south (to your right) at the "T" and follow the levee between Mounds Pools #2 and #3. Look for eagles, ducks and wading birds from October through March. The nesting boxes along the levee are for the Eastern bluebird, which hunts insects over old fields and open grassy areas, such as Mounds Pool #2.

Eventually, the levee will bring you to a grassy service road that lies very close to the Mounds Pool #3 eagle nest. Please observe the signs protecting the nest area from disturbance. The nest is usually active from November-March. The refuge biologist flies over all of the refuge's eagle nests several times annually to assess nesting activity.

Turn right onto the service road, which will take you back to the paved road and back to your car. If the pull-off area at Stop 4 is crowded, reverse these directions and park on the apron just before the service road. Remember not to block the gates to official vehicle traffic.



Bald Eagle

Headquarters Pond

Both Headquarters Pond and Picnic Pond were once tidal pools. Today, they are managed as fresh or brackish pools. Headquarters Pond gets its name from its proximity to an early refuge headquarters and work center that was located nearby during the 1940's and 1950s. Viewing ducks and wading birds from the Headquarters Pond Trail observation deck is wonderful during the winter. Wood duck hens and their broods can often be seen swimming around the wood duck nest boxes in the summer.

Alligators enjoy Headquarters Pond year-round. Look especially for baby 'gators in the summertime. The green vegetation floating on the surface of the pond is not slime, but a small three-leaved floating plant called "duckweed". It hides many insects and is a common food source for wintering ducks. Sometimes black-crowned night herons can be seen among the willows along the edges, and wood storks use snag trees and pine trees for perches during the spring and fall.

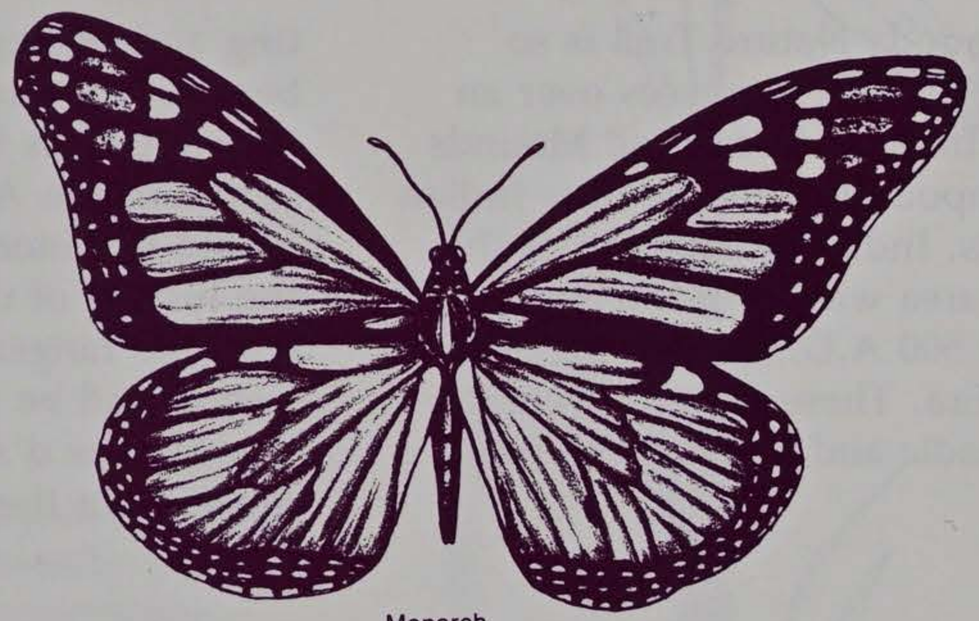
The Mounds Nature Trail is so named because it crosses over an Indian mound. In fact, all Mounds Pool impoundments are near Indian mounds. Indian occupation of the refuge area was most intense around 500 A.D., during the Swift Creek Era. These Indians were fairly nomadic and enjoyed the hunting and fishing available near the bay. A flint quarry, now completely submerged, is located off the lighthouse in Apalachee Bay. If you would like more information about the history of the area, please check with the ranger at the Visitor Center and be sure to visit the Fort San Marcos d'Apalache state museum in the town of St. Marks.

The Mounds Trail is one mile long and provides a good walk through several different habitats found on the refuge: pine flatwoods, oak ridge, brackish pond, saltwater marsh and oak/cabbage palm hammock. A trail guide should be available at the start of the trail. Many birders enjoy this trail during the winter and the spring, when the woods are filled with small migrating songbirds.

Salt Marsh

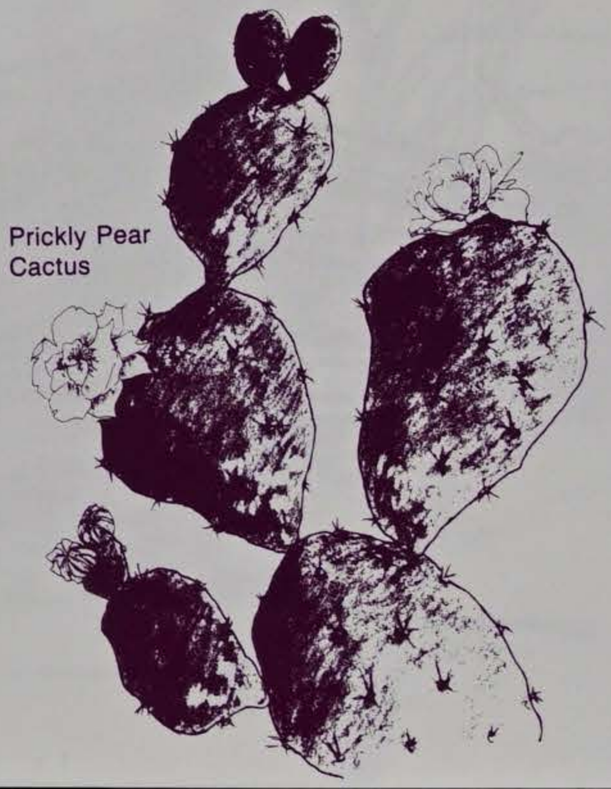
Shorebirds and wading birds enjoy the protected waters of the marsh during stormy weather. Look for birds on the power line during spring and fall migration. Notice the prickly pear cactus that grows along the side of the road. Note that the plants look more scrubby and have a more arid appearance in this area where the salt content of both land and water has increased. In the fall, thousands of monarch butterflies dot the goldenrod blooms as they gather food for their long migration across the Gulf.

The pinewoods have thinned out and you are now driving through an area with the Wilderness Area salt marsh on both sides. Many small pine islands dot the marsh. Geologists think that these could be the remnants of a barrier beach ridge that existed several thousand years ago when sea level was higher than today. Bald eagles enjoy perching on the tall trees in these marsh islands.



Monarch

Goldenrod

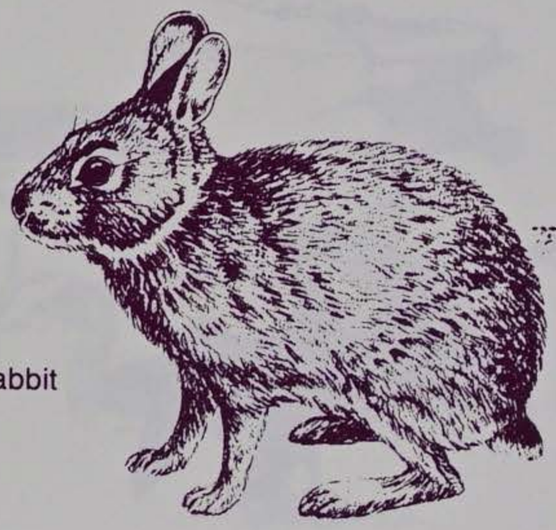


Prickly Pear Cactus

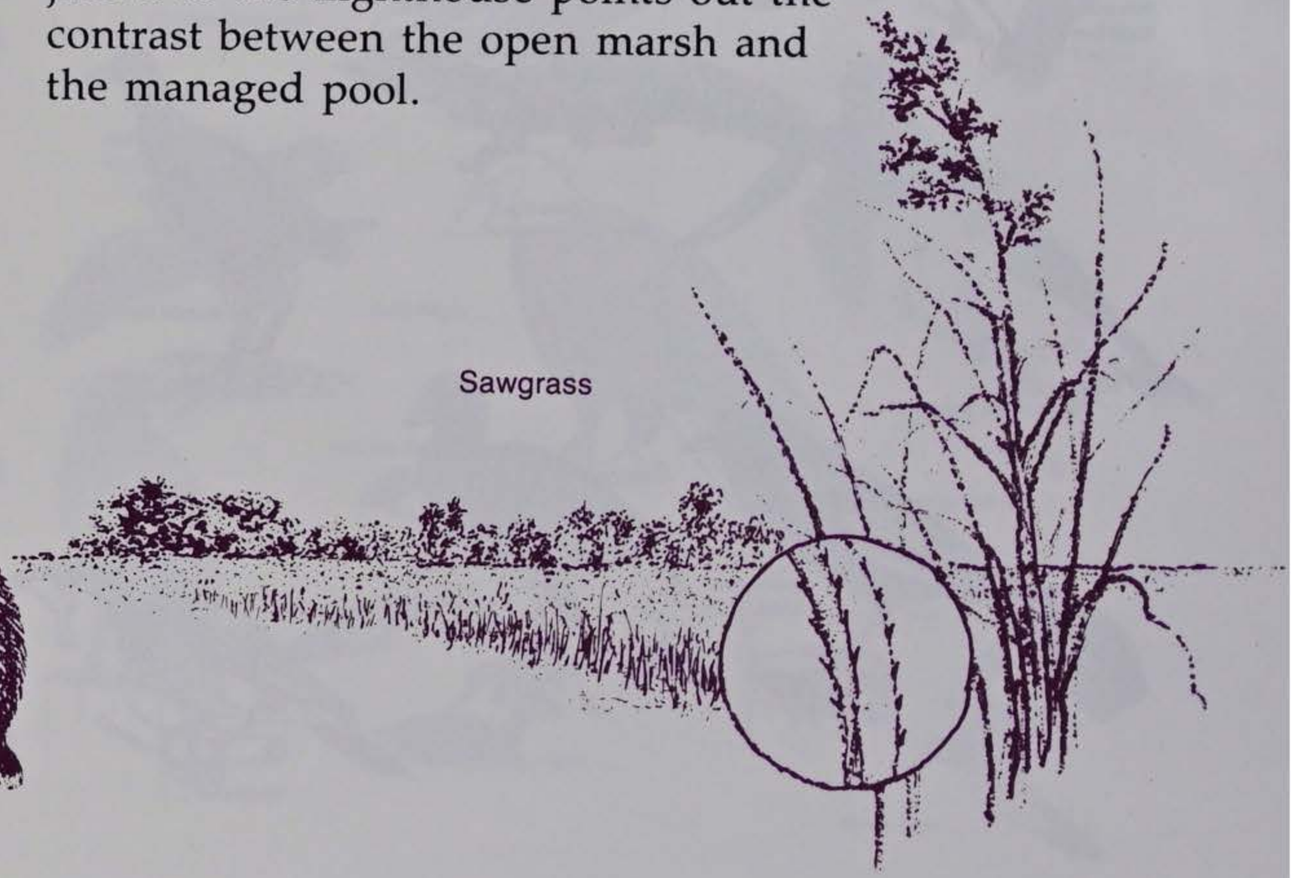
Lighthouse Pool

Lighthouse Pool (on your right) is the last man-made pool along the tour. No fresh water enters this pool except rainwater. To the west of the pool is the 24 hour saltwater boat ramp and parking lot. To the south is the man-made levee leading to a rock jetty, popular with bank fishermen. This is marked as the Levee Trail, and a round trip walk out to the jetty is about .4 mile. A leaflet in the box at the trailhead informs visitors of the many uses of the trail's plants by wildlife and humans. Marsh rabbits are often seen on this trail in the morning and afternoon. Pelicans, cormorants, gulls and shorebirds are easy to spot on the bay side, while alligators may be out sunning on the large grassy islands in the pool.

Rails, bitterns, ducks, herons, egrets, and ibises all use the Lighthouse Pool. Sago pondweed, marsh grass, and wigeon grass provide an abundant food source for many of these birds and the standing vegetation in the pool provides both cover and protection for the more secretive species. The view from the observation deck adjacent to the Lighthouse points out the contrast between the open marsh and the managed pool.



Marsh Rabbit



Sawgrass

Mockingbird ___

Turkey Vulture ___

Osprey ___

Great Blue Heron ___

Brown Pelican ___

Meadowlark ___

Black Vulture ___

Tricolor Heron ___

Red-winged Blackbird ___

Herring Gull ___

Bonus! American Alligator ___

Laughing Gull ___

Eastern Kingbird ___

Purple Gallinule ___

Common Moorhen ___

Great Egret ___

Boat-tailed Grackle ___

American Coot ___

Snowy Egret ___

Kingfisher ___

Cormorant ___

Spring/Summer Checklist

Fall/Winter Checklist

Puddle Ducks

Mallard ___

Pintail ___

Shoveler ___

Blackbird ___

American Wigeon ___

Diving Ducks

Redhead ___

Bufflehead ___

Canvasback ___

Belted Kingfisher ___

Great Egret ___

Hooded Merganser ___

Brown Pelican ___

Ibis ___

Tricolor Heron ___

Kestrel ___

Snowy Egret ___

Other Wetland Users

Red-shouldered Hawk ___

Cormorant ___

Great Blue Heron ___

Dowitcher ___

Marsh Hawk ___

Bald Eagle ___

Herring Gull ___

White Pelican ___

Common Moorhen ___

Common Tern ___

Grebe ___

Yellowlegs ___

Coot ___

Black Tern ___

Lighthouse

You have now reached the parking lot at the St. Marks Lighthouse, looking out on Apalachee Bay. The Lighthouse, built in 1831, is now a National Historic Site. It is still an active light and has shone out over the Bay through hurricanes, pirate attacks and a federal gun boat blockade during the Civil War. Today, the local Coast Guard Auxiliary maintains a search and rescue station there on the weekends. The St. Marks Lighthouse remains one of the few active lighthouses in the country that is so accessible to the public.

The beautiful Apalachee Bay in front of you is a rich habitat for fish, shellfish, sea turtles, dolphins and manatees. Most marine life here is dependent on the fragile grass beds that are seen as dark green blotches on the sandy bottom. In the winter, shoalgrass is the preferred food of redhead ducks. Loons and horned grebes, along with many species of diving ducks, are also seen in the Bay during the winter. At low tides, the exposed mud flats are carefully combed by herons, egrets, and shorebirds for small crabs, snails and fish. Thirty-two thousand acres of Apalachee Bay is protected by the U.S. Fish and Wildlife Service from migratory bird hunting. This Executive Closing Boundary is denoted by large pilings set out in the Bay, that range between 1 and 2 miles from shore.

The pilings you see to the right of the Lighthouse next to the shore are the remnants of the lighthouse keeper's boathouse. Since the road was so terrible some 40 years ago, it was easier for the keeper's family to get supplies by boat from up the river in the town of St. Marks than by land.

Place an "X" in the appropriate box as you observe these objects in the Refuge. Whoever gets BINGO first, wins!

Wildlife

B I N G O

Pine Tree	Insect	Yellow Flower	Seagull	Impound-ment
Cattails	Deer	Alligator	Litter	Shells
Turkey Vulture	Trail	FREE SPACE	Snake	Source of Air/ Water Pollution
River	Mocking-bird	Butterfly	3 Birds Together	Heron or Egret
Water Lillies	Cabbage Palm	Edible Plant	Refuge Sign	Oak Tree

Unscramble the words to discover what makes a habitat.

_ _ _ _	TWERA
_ _ _ _ _ _ _ _	REELHTS
_ _ _ _	ODFO
_ _ _ _ _	EASCP

Unscramble the words to name 4 Florida habitats.

_ _

ODDROWHA SMKOHMCA

_ _

STLA RAHSM

_ _

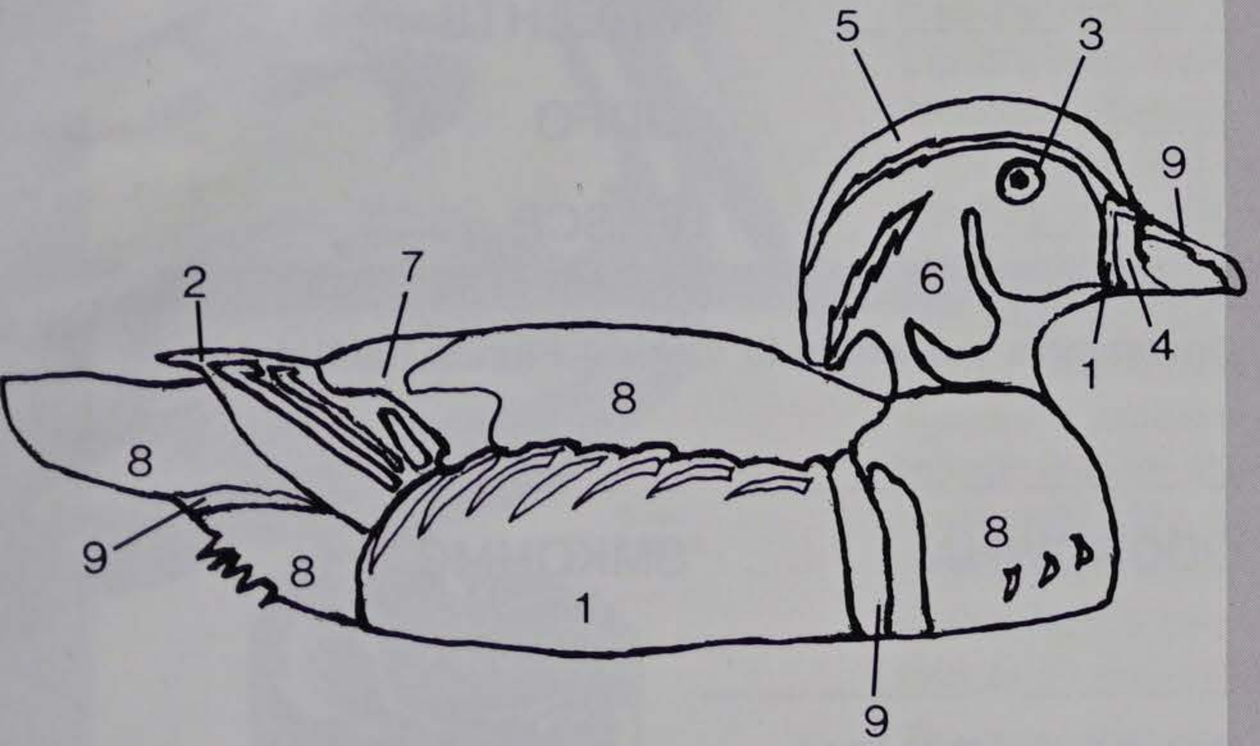
IENP SOLATDWOF

_ _ _ _/_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

NEPI/BURSC KAO SGEDRI

(Answers on back)

Color the Wood Duck!



1- Yellow
2- Blue
3- Red
4- Orange
5- Green
6- Teal
7- Purple
8- Brown
9- Black

Answers to Scrambled Words:
Water, Shelter, Food, Space
Hardwood Hammocks, Salt Marsh, Pine Flatwoods, Pine/Scrub Oak Ridges

Find the Hidden Words

The words are found across, down, backwards and diagonally

S B W T O O C R C I V X L M Z S B
M L Z F Q N O O C C A R Q S B A P
V F L D S Z G E S S F V P H R S E
W B A U D E L G A E C O J C S B L
I S U K G V S I B I B D L W M Q I
D A O T X J Q C H L O R P K N B C
B H A P T B U Z M L B A S I W Z A
F E S B R E I P S Q C Z E P B A N
L R X S E B R O V R A I B K S Q H
E O M D E E R F B C T L N M A F M
L N J Q F I E S L L W J F H P N I
T K V N R A L B S Y X L S P A R S
R B R F O P T U R K E Y W S G K P
U T E R G E L Z B F Q P B O V C L
T R O T A G I L L A L Z R G T U Z
B S Z I L X K P C I R F X L M D B

Hawk Lizard Squirrel Bobcat Pelican Gull Egret Turtle Owl
Ibis Snake Deer Eagle Frog Raccoon Turkey Heron
Alligator Crab Duck Coot Butterfly Toad

Purpose

This guidebook has highlighted many points along the Lighthouse Road over several seasons. The refuge staff would like you to return many times to explore them all. Also, think about visiting one of the other national wildlife refuges around the country or possibly visiting some of the local north Florida parks. Information on these is available at the Refuge visitor center, open seven days a week, except for Federal holidays. Also, call the Refuge at 904/925-6121, if you have additional questions.

"St. Marks National Wildlife Refuge is here to be enjoyed by you and future generations to come"

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LEGEND

Drive

Visitor Center

Dike

Unpaved Road

Trails

1 Observation Points

ST. MARKS UNIT

Plum Orchard Pond Trail

Visitor Center

1

Primitive Trails

Walking

Tram Rd.

East River Pool

2

Field

3

Stoney Bayou Pool No.1

Stoney Bayou Pool No.2

Stoney Bayou Dike

E. Stoney Bayou Pool

Mounds Pool No. 1

4

Mounds Pool No. 2

Mounds Pool No. 3

Headquarters Pond

5

6

Tower Pond

Mounds Trail

Picnic Pond

7

Lighthouse Pool

Lighthouse

8

Apalachee Bay

Recycled Paper